

**Using Geographical Information Systems to investigate the
Bushmeat Phenomenon in KwaZulu-Natal**

By

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ABSTRACT

The bushmeat phenomenon is spreading throughout the African continent. Wildlife species are slain and conservation areas are under increasing strain. Although studies have been conducted in east, central and western Africa, limited resources regarding this phenomenon exist. This is the first study to be conducted in the southern African region. Initially the study was intended for the whole of South Africa, but due to a lack of co-operation from other provincial governments and the unavailability of data, the study was focussed on conservation areas within KwaZulu-Natal.

Data regarding bushmeat occurrences were collected from Ezemvelo KZN Wildlife and the South African Police Services. With the help of a Geographical Information System, the data was overlain with other datasets such as the National Census data and a real-world model was created to establish the correlation and relationship between the bushmeat phenomenon in southern Africa compared to other regions of the continent.

The results confirmed a steady increase in the number of reported bushmeat occurrences in KwaZulu-Natal from year to year. The increase in the number of bushmeat occurrences in KwaZulu-Natal can be attributed to an increase in population and poverty as well as the lack of a substantial alternative protein source. Bushmeat are primarily targeted by members of impoverished communities in the surrounding rural areas. Bushmeat are sold at local commercial markets as a subsistence protein source for consumption by the local communities. There is no evidence of a significant international commercial trade in bushmeat in the study area. Poachers travel great distances on foot to hunt inside conservation areas where the targeted animal species are still relatively abundant. Snares are utilised as the most preferred method for poaching in all areas. Hunters also utilise traditional weapons and dogs, but the use of firearms are relatively limited. According to the information derived from the analysis, Nyala and Wildebeest were the most targeted species during poaching activities. The highest percentage of bushmeat occurrences in KwaZulu-Natal take place in Mkhuze- and Ndumo Game Reserves.

One of the most troubling results of the study was the police action associated with bushmeat occurrences. In most cases no Police Action was involved and only a limited amount of bushmeat incidents resulted in arrests being made. More effective policing by the South African Police Services are recommended as well as an increase in judiciary participation. More effective documentation of bushmeat occurrences by utilising a Global Positioning System to accurately log the specific locations as well as standardised documentation procedures are recommended for all field officers in all protected areas and regions. This will enable more effective monitoring of the bushmeat phenomenon. It is essential to address the key socio-economic problems as the main cause for the increase in the number of bushmeat occurrences in KwaZulu-Natal. The illicit bushmeat trade in the areas surrounding Mkhuze- and Ndumo Game Reserve can only be brought under control once the quality of life for the surrounding communities improves and more employment opportunities are created. Community conservation and awareness programmes as well as a better understanding of, and an increase in partnerships with surrounding communities will help to alleviate the bushmeat problem.

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